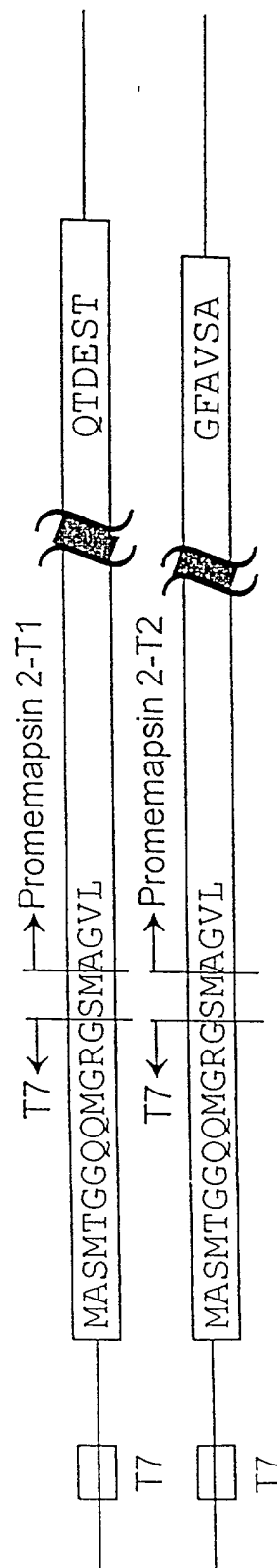


FIG. 1

1v MASMTGGQQM GRGSMAGVLP AHGTQHGIRL PLRSLGGAP LGLRLPRETD  
 36p EEPEEPGRRG SFVEMVDNLR GKSGQGYVE MTVGSPQTL NILVDTGSSN  
 38 FAVGAAPHFP LHRYYQRQLS STYRDLRKG VVPYTQGWKWE GELGDLVSI  
 88 PHGPNVTVRA NIAAITESDK FFINGSNWEG ILGLAYAEIA RPDDSLPEFF  
 138 DSLVKQTHVP NLFSLQLCGA GFPLNQSEVL ASVGSGMIIG GIDHSLYTGS  
 188 LWYTPIRREW YYEVIIVRVE INGQDLKMDK KEYNYDKSIV DSGTTLRLP  
 238 KKVFEAAVKS IKAASSTEKF PDGFWLGEQL VCWQAGTTPW NIFPVISLYL  
 288 MGEVTNQSR ITILPQQYLR PVEDVATSQD DCYKFAISQS STGTVMGAVI  
 338 MEGFYVVFDR ARKRIGFAVS ACHVHDEFRT AAVEGPFVTL DMEDCGYNIP  
 388 QTDESTLMTI AYVMAAICAL FMLPLCLMVC QWRCLRLRQ QHDDFADDIS  
 438 LLK\*



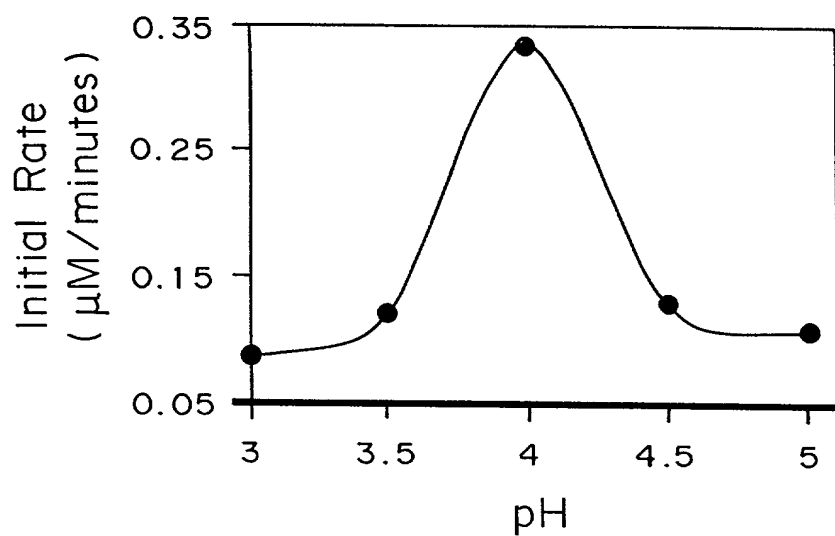


FIG. 2A

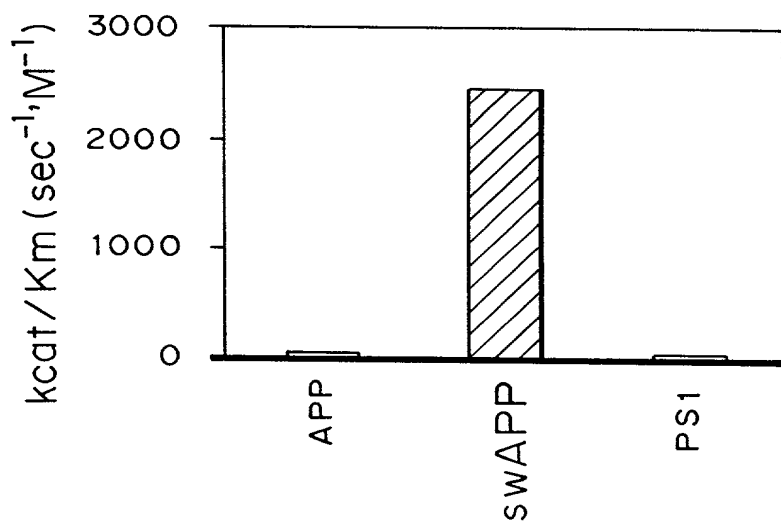
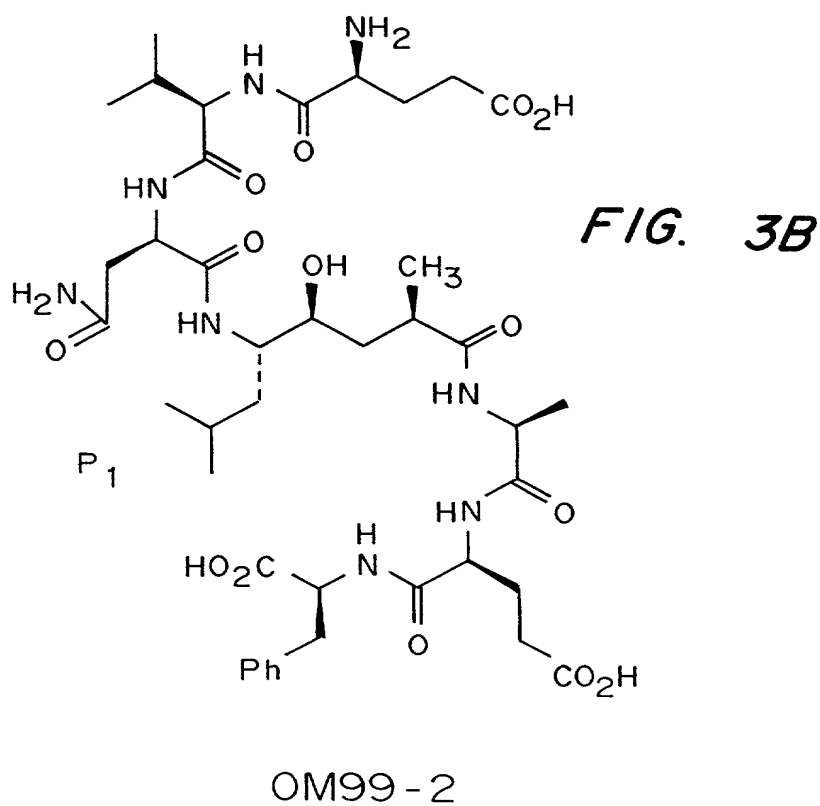
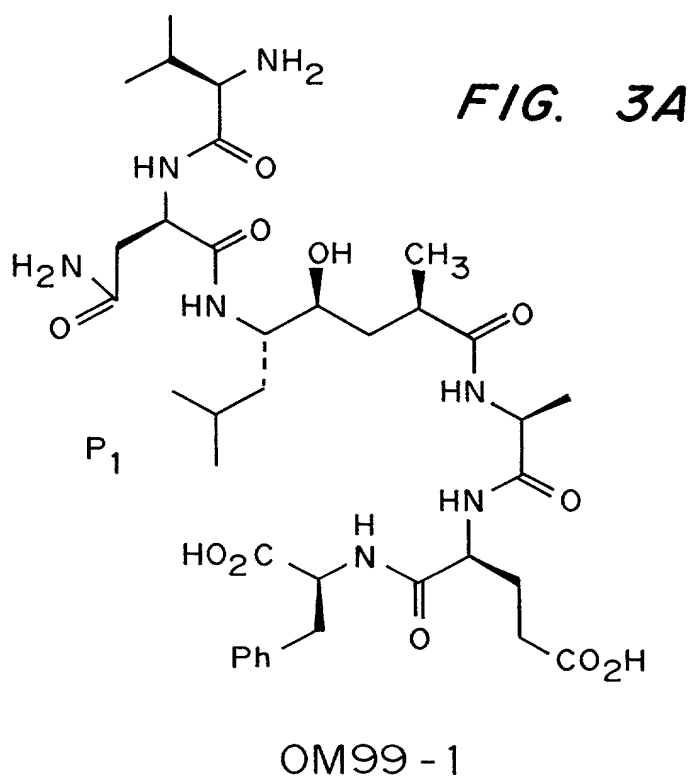
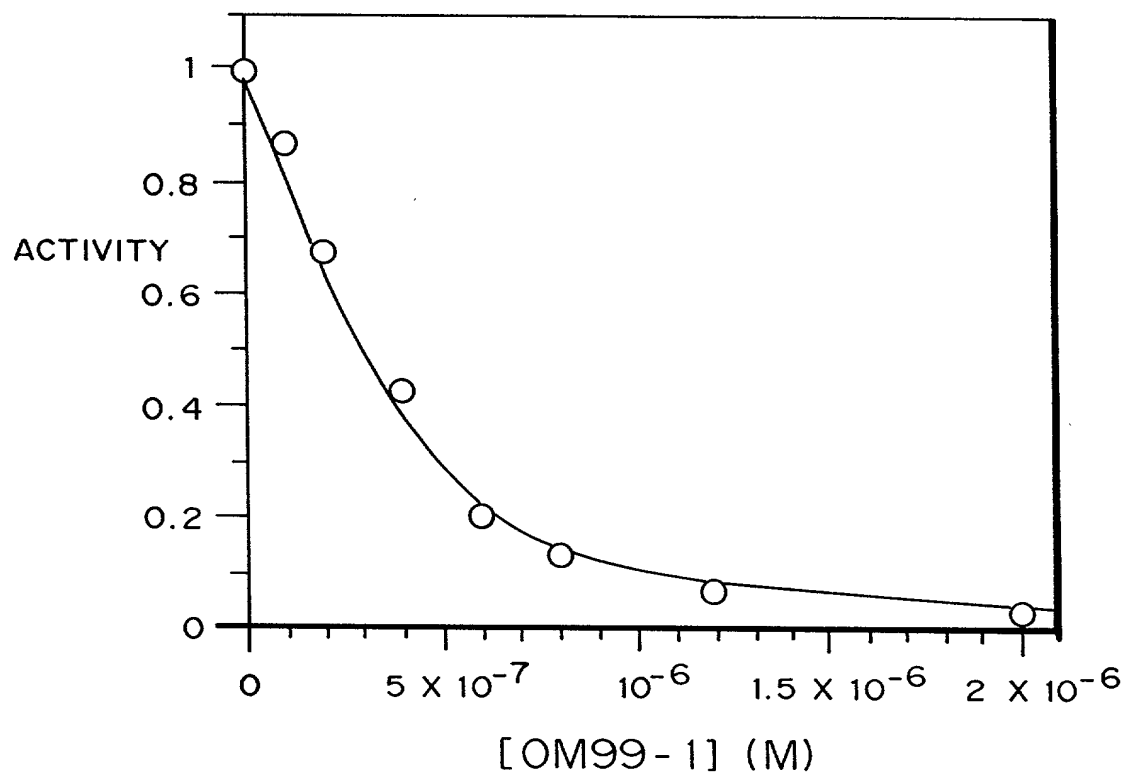


FIG. 2B



**FIG. 4A**



[Mep2] = 0.47  $\mu$ M

[Fluo. Substrate] = 29.9  $\mu$ M

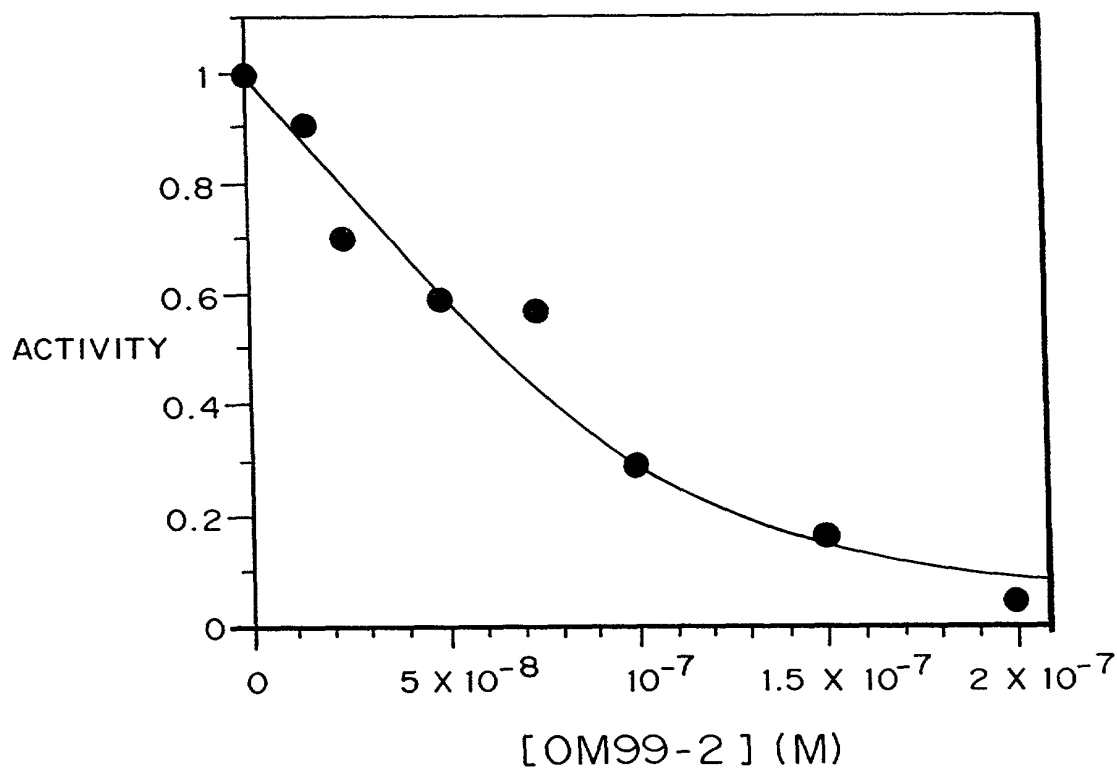
Buffer: Na Acetate 0.1 M, 5% DMSO, pH 4.5 at 37°C

Excitation at 350 nm

Emission at 490 nm

Parameter	Value	Std. Error
Ki	6.84 e - 8	2.72 e - 9

**FIG. 4B**



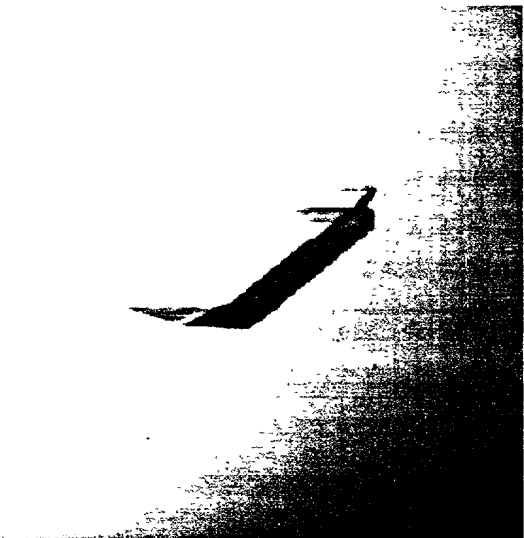
[E]<sub>0</sub> = 0.11 μM

[Fluo Substrate] = 29.9 μM

Parameter	Value	Std. Error
K <sub>i</sub>	9.58e-9	2.86e-10

094452254350

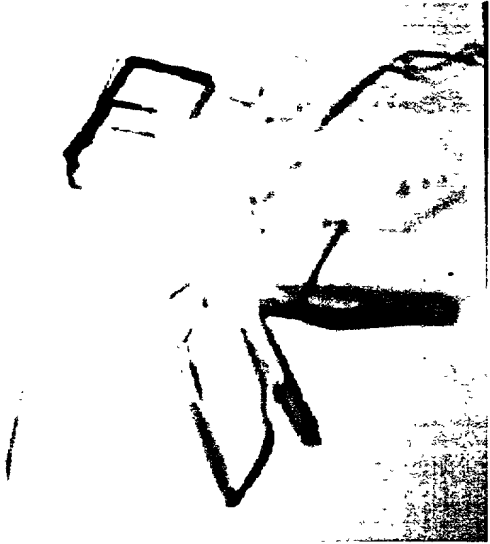
FIG. 5A



**FIG. 5A**



**FIG. 5B**



**FIG. 5C**



**FIG. 5D**



**FIG. 5E**

FOOEH0" 92264B5D

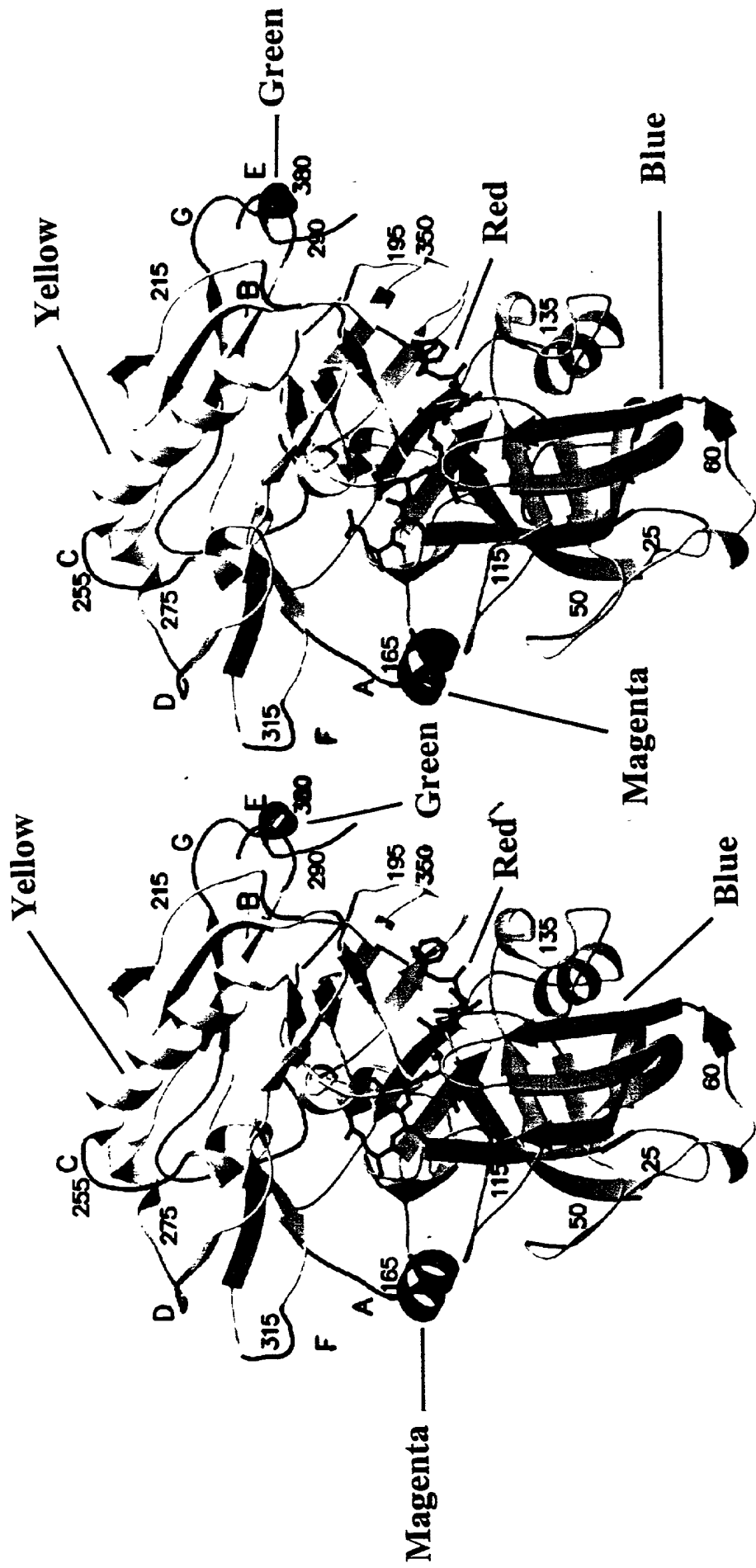
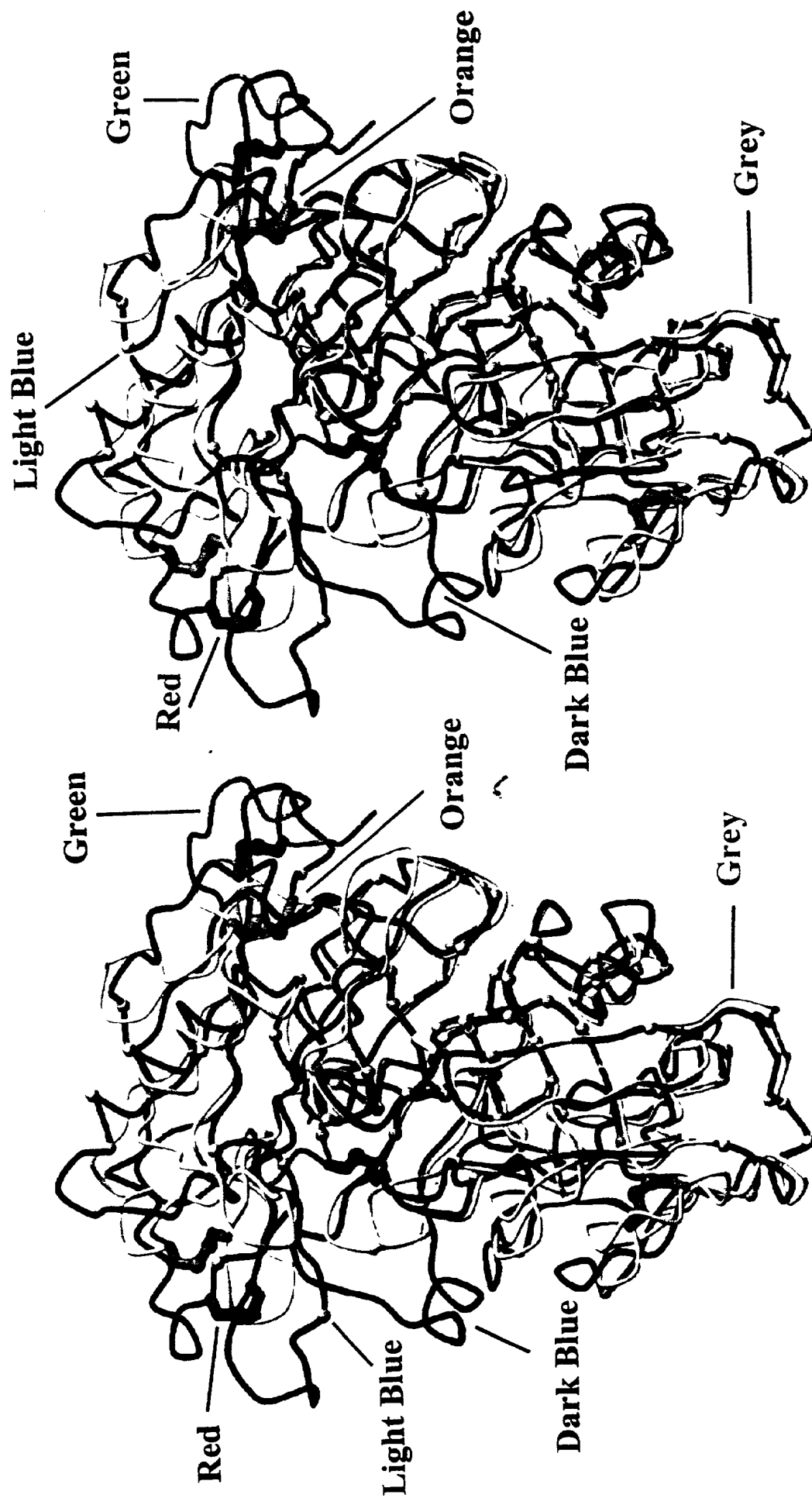


FIG. 6



**FIG. 7**



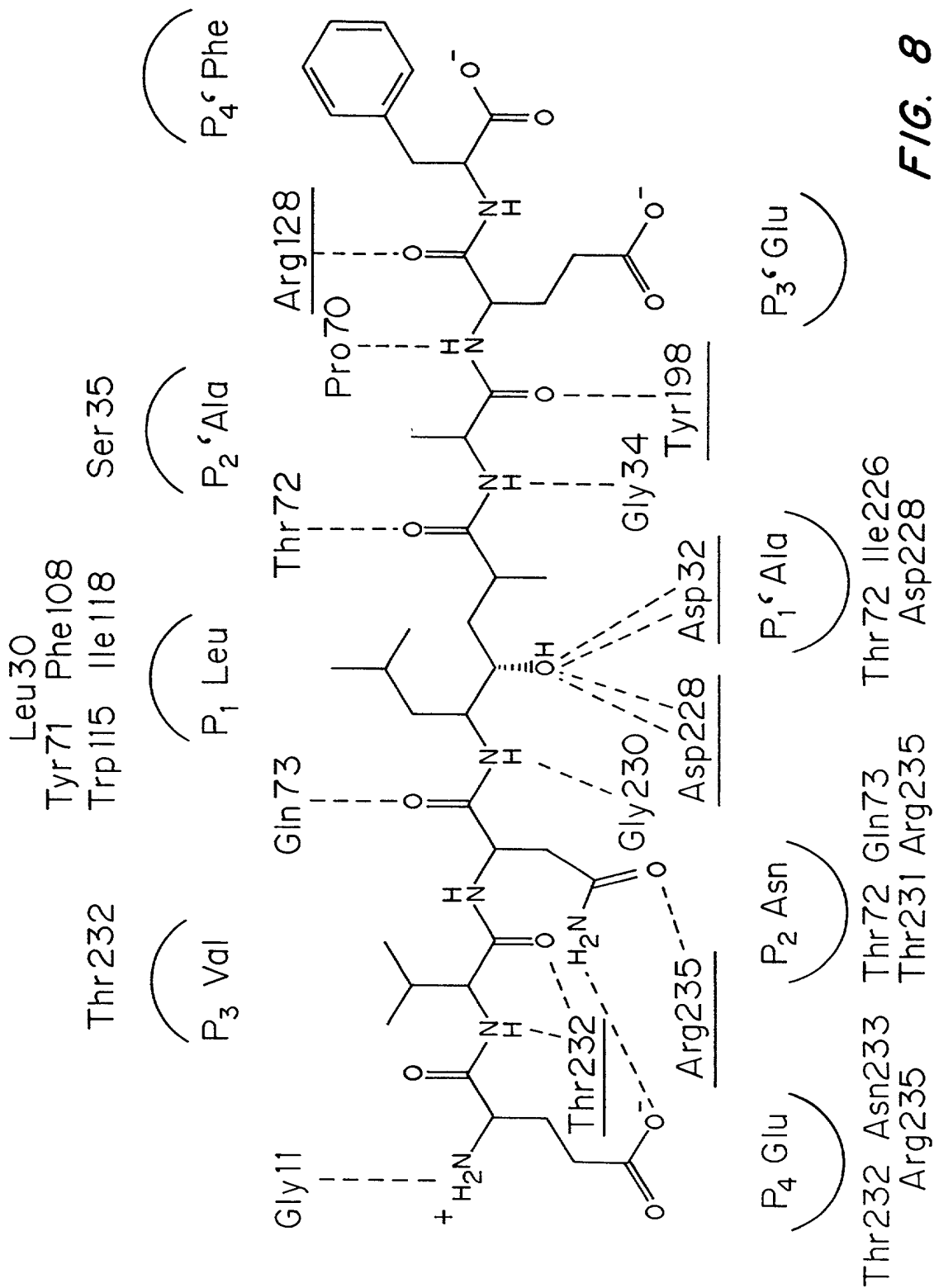
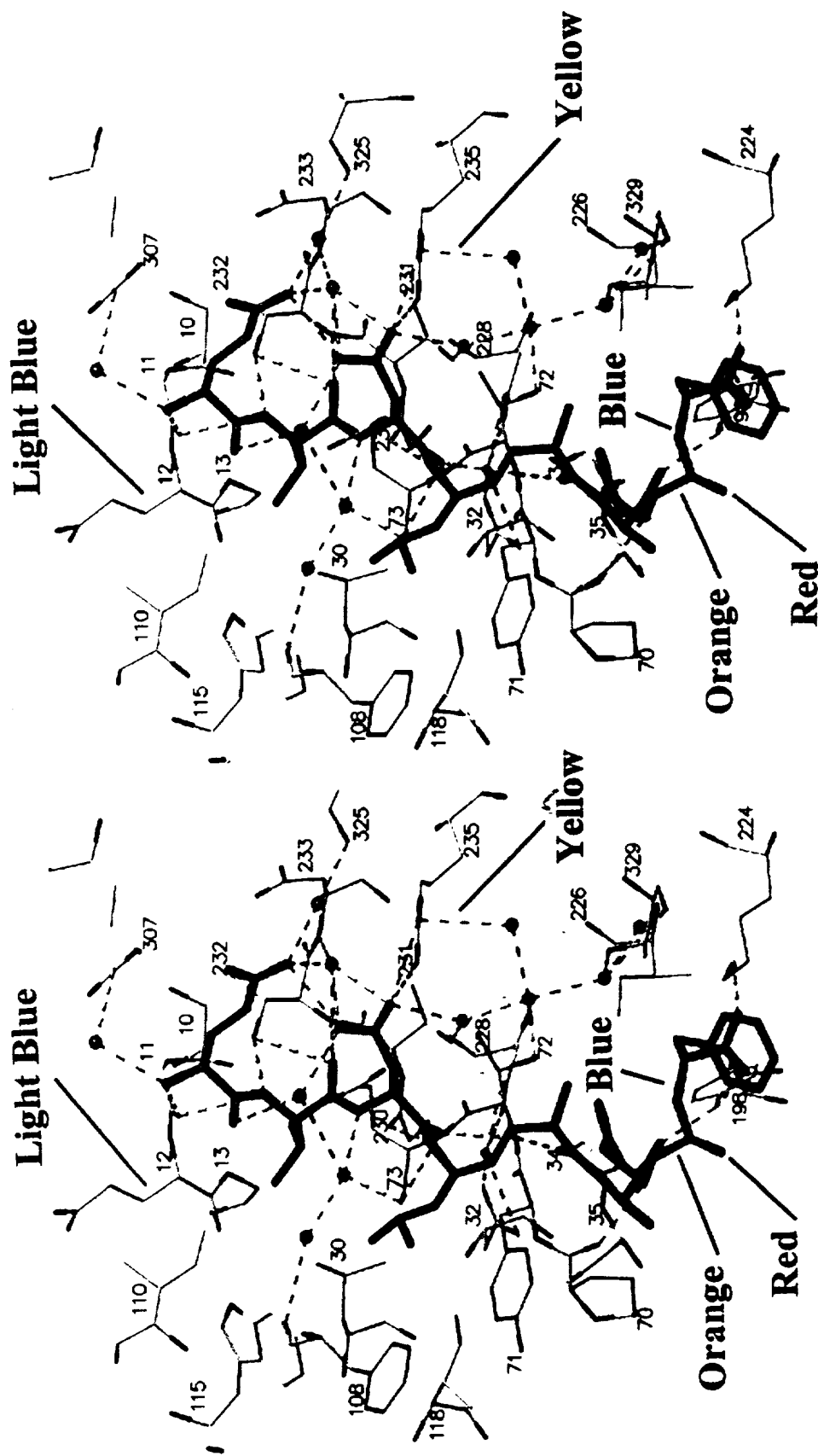


FIG. 8



**FIG. 9**



**FIG. 12**

Chemical structure of 2-amino-3-methylbutanoic acid is shown. The structure includes a carboxylic acid group (COOH) at the top, a chiral center (C2) with an amino group (NH<sub>2</sub>) and a hydrogen atom, and another chiral center (C3) with a methyl group (CH<sub>3</sub>) and a hydrogen atom. Three arrows point to the structure: Thr 252 points to the carboxylic acid group, Thr 350 points to the amino group, and Thr 93 points to the methyl group.

Chemical structure of a peptide fragment, labeled FIG. 13. The structure shows the backbone and side chains of four residues: Asn (Asparagine), Ala (Alanine), Val (Valine), and Leu (Leucine). The residues are connected by peptide bonds. The side chains are represented by circles: P<sub>2</sub> Asn (NH<sub>2</sub>), P<sub>1</sub>' Ala (CH<sub>3</sub>), P<sub>3</sub> Val (isopropyl group), and P<sub>1</sub> Leu (methyl group, CH<sub>3</sub>). The structure includes labels for specific atoms: (B) for the amide nitrogen of the Asn residue, (A) for the amide nitrogen of the Ala residue, and (C) for the alpha-carbon of the Leu residue. Dashed lines indicate interactions between (B) and (A), and between (A) and (C). The side chain of the Leu residue is shown as a methyl group (CH<sub>3</sub>) in a circle. The side chain of the Val residue is shown as an isopropyl group in a circle. The side chain of the Ala residue is shown as a methyl group (CH<sub>3</sub>) in a circle. The side chain of the Asn residue is shown as an amide group (NH<sub>2</sub>) in a circle.